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| 10/587,826      | 11/02/2006  | Toshiya Ogawa        | 024918-0125         | 2381             |

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| EXAMINER |
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GITOMER, RALPH J

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| ART UNIT | PAPER NUMBER |
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1657

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02/05/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/587,826 | <b>Applicant(s)</b><br>OGAWA ET AL. |  |
|                              | <b>Examiner</b><br>Ralph Gitomer     | <b>Art Unit</b><br>1657             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/2/06</u> . | 6) <input type="checkbox"/> Other: _____  |

Applicant's election with traverse of Group I, claims 1-15, in the reply filed on 12/31/09 is acknowledged. The traversal is on the ground(s) that: no reasons are given. This is not found persuasive because of reasons of record.

The requirement is still deemed proper and is therefore made FINAL.

The IDS received 11/2/06 based on the EP search report has been considered. The translated specification is a poor translation and lacks standard format and headings. For example, headings in parentheses are confusing.

On 11/2/06 and amendment to the specification was received changing oats to barley. This preliminary amendment has not been entered because it substantially changes the nature of the invention which is improper and introduces new matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Speers in view of Nagarajan.

Speers (J Am Soc Brew Chem) entitled "Towards an Ideal Flocculation Assay" teaches on page 174 Fig. 1 Helm assay where yeast is washed in EDTA, suspended in acetate buffer with EDTA, add calcium chloride and measure flocculation at 30 minutes. On page 175 column 1 first paragraph the Soares method includes an EDTA washing step. Various wavelengths may be measured including 600 nm. On page 175 column 1 last paragraph bridging to column 2, the assay media are discussed and may have a composition representative of beer.

The claims differ from Speers in that they specify the growth phase of the yeast is late log phase or thereafter. It is understood that the floc rate differs with the growth phase along with many other factors.

Nagarajan (J of General Micro) entitled "Antigenic Studies on Flocculating Brewer's Yeast, SC NCYC 227" teaches on page 1747 column 2 under Methods, the growth medium contains yeast extract, calcium chloride, cells were washed with EDTA solution and OD660 was determined. On page 1748 Table 1 at different growth phases and degree of flocculation were determined.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to practice the method of Speers to determine flocculation and to perform that method at the late log phase or thereafter because Nagarajan shows a floc assay at 6 different growth phases where the results vary greatly and the degree of flocculation increases after late log phase. The method of determining claimed is conventional. The selection of which growth phase would be determined by what one wishes to learn about the yeast tested. No novelty is seen in selecting any particular growth phase to test the yeast

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are directed to measuring factors causing early flocculation of yeast contained in brewing materials. This is distinct from measuring a rate of flocculation. The present specification as originally filed does not provide written description above measuring a rate. No factors or mechanisms are found by the present method.

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A reading of the specification reveals the invention may rely on determining the rate of flocculation without performing fermentation. This has not been claimed and the claims as presented do not exclude fermentation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of the following applies in all occurrences.

The claims must be carefully rewritten in accordance with standard US patent practice. Only a few specifics will be addressed further here. Claim 1 is essentially meaningless where yeast is prepared, something is extracted from something, and precipitation is measured. "Quickly" is a relative term and is not then related to any speed in the claims. "Brewing materials" reads on water among many other things, and most any carbohydrate source has been employed for fermentation. The preamble of claim 1 is directed to brewing materials but no such materials are found in the rest of the claim. In step 1 "or thereafter" is not understood in context. In step 2 the hyphens are improper. Also in step 2 "a test material sample" does not relate to the preamble and is unclear as to what it could be, glass possibly? In step 4 "a precipitation level" is not understood because precipitation does not have levels. And how the steps claimed relate to the preamble is not seen. There are many instances of lack of antecedent basis in the claims, in claim 6 "during extraction", in claim 9 "the test system", "the serial

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change”, for example. In claim 8 "by using OD600" is not understood and is improper. Abbreviations such as “min” and “sec” are improper in claims. In claim 11 “non-early” is queried. In claim 11 “the sample” lacks antecedent basis. In claim 12 “stand still” is queried, "instead" is not understood. In claim 14 “a high MW fraction of an extraction solution” is not understood. And “barley ground materials” is not understood. Claim 15 is improper, no factors are seen, and using is not a proper method step. And claim 15 fails to further limit claim 1 from which it might depend.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi (5,866,374) teaches in column 10 first paragraph flocculating properties of yeast measured with OD600.

Verstrepen (App Microbiol Biotechnol) entitled “Yeast Flocculation: What Brewers Should Know” teaches basics of flocculation.

Buckwold (Cerveza Y Malta) teaches determining flocculation.

JP 10-179190 English translation ordered, teaches a rapid flocculation method.

Nakamura (WO98/29564) English translation ordered, teaches a method of determining flocculation.

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D'Hautcourt (J Am Soc Brew Chem) entitled "Measurement of Brewing Yeast Flocculation" teaches on page 125 Fig. 1 washing the yeast in EDTA and measuring absorbance at 600 nm. A suspension solution has calcium sulfate and an acetate buffer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ralph Gitomer whose telephone number is (571) 272-0916. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on (571) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ralph Gitomer/  
Primary Examiner, Art Unit 1657

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